

CLAIMS

What is claimed is:

1. A logical device for rating the performance of one or more resource vendors in a grid computing environment, comprising:
 - 5 an input for receiving one or more resource self-reports, each self-report having statistics regarding job processing;
 - an input for receiving one or more client-driven performance criteria definitions;
 - an input for receiving one or more job results from a grid resource;
 - 10 an output for outputting a Grid Vendor Rating Table; and
 - a grid resource analyzer configured to perform an analysis of said received job results against said client-driven performance criteria and said self-reports, and configured to produce a grid resource rating table having zero or more sub-ratings, and a composite rating.
- 15 2. The system as set forth in Claim 1 wherein said input for receiving one or more client-driven performance criteria definitions comprises an input for receiving a Service Level Agreement.
- 20 3. The system as set forth in Claim 1 wherein said grid resource analyzer is

configured to perform analysis to produce one or more sub-ratings selected from the group of percentage of jobs completed, percentage of jobs completed within specified time constraints, an interactiveness rating, a cost compliance rating, and a results accuracy rating.

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4. The system as set forth in Claim 1 wherein said grid resource analyzer is configured to produce a composite rating using a weighted combination of a plurality of sub-ratings.

- 10 5. The system as set forth in Claim 1 wherein said grid resource analyzer is configured to produce a human-readable report.

6. The system as set forth in Claim 1 wherein said grid resource analyzer is configured to produce a computer-readable report.

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7. The system as set forth in Claim 1 wherein said grid resource analyzer is configured to produce a rank-ordered Grid Vendor Rating Table for a plurality of resource vendors.

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8. The system as set forth in Claim 7 wherein said grid resource analyzer is configured to produce a rank-ordered Grid Vendor Rating Table for a plurality of resource vendors using a weighted analysis of said sub-ratings for each resource vendor.
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9. The system as set forth in Claim 1 further comprising a grid vendor selector configured to receive said Grid Vendor Rating Table, a job request, a set of available grid resource characteristics, and one or more client-driven performance criteria definitions, and to produce a grid vendor selection which meets said
- 10 client-driven performance definitions according its grid resource characteristics, and which is indicated by said Grid Vendor Rating Table to historically meet desired performance criteria.
10. The system as set forth in Claim 1 wherein said grid resource analyzer is
- 15 configured to produce a Grid Vendor Rating Table for a plurality of resource vendors having an indication of the age of the information upon which the table is based.
11. The system as set forth in Claim 1 wherein said grid resource analyzer is
- 20 configured to produce a Grid Vendor Rating Table containing an indicator of the

number of jobs upon which the ranking for each resource vendor is based.

12. The system as set forth in Claim 1 wherein said grid resource analyzer is configured to produce a Grid Vendor Rating Table containing one or more analysis pertaining to job types.
13. The system as set forth in Claim 12 wherein said job type is selected from the group of Online Transaction Processing jobs, batch jobs, database jobs, and scientific jobs.
14. A method for automatically rating the performance of one or more resource vendors in a grid computing environment, comprising the steps of:
- receiving one or more grid resource self-reports, each self-report having statistics regarding job processing;
 - accessing one or more client-driven performance criteria definitions;
 - receiving one or more job results from a grid resource; and
 - performing by a logical device an analysis of said job results against said client-driven performance criteria and said self-reports; and
 - producing a grid resource rating table having zero or more sub-ratings, and having a composite rating.

15. The method as set forth in Claim 14 wherein said step of receiving one or more client-driven performance criteria definitions comprises receiving a Service Level Agreement.
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16. The method as set forth in Claim 14 wherein said step of performing an analysis comprises determining one or more sub-ratings selected from the group of percentage of jobs completed, percentage of jobs completed within specified time constraints, an interactiveness rating, a cost compliance rating, and a results accuracy rating.
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17. The method as set forth in Claim 14 wherein said step of performing an analysis comprises determining a composite rating using a weighted combination of a plurality of sub-ratings.
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18. The method as set forth in Claim 14 wherein said step of producing a grid resource rating table comprises producing a human-readable report.
19. The method as set forth in Claim 14 wherein said step of producing a grid resource rating table comprises producing a computer-readable report.
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20. The method as set forth in Claim 14 wherein said step of producing a grid resource rating table comprises producing a rank-ordered Grid Vendor Rating Table for a plurality of resource vendors.

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21. The method as set forth in Claim 20 wherein said step of producing a rank-ordered Grid Vendor Rating Table for a plurality of resource vendors comprises producing a rank-ordered Grid Vendor Rating Table for a plurality of resource vendors using a weighted analysis of said sub-ratings for each resource vendor.

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22. The method as set forth in Claim 14 further comprising:

accessing said produced Grid Vendor Rating Table, a job request,

a set of available grid resource characteristics, and one or more client-driven

15 performance criteria definitions; and

producing a grid vendor selection which meets said client-driven performance definitions according its grid resource characteristics, and which is indicated by said Grid Vendor Rating Table to historically meet desired performance criteria.

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23. The method as set forth in Claim 14 wherein said step of producing a Grid Vendor Rating Table comprises producing a table having an indication of the age of the information upon which the table is based.
- 5 24. The method as set forth in Claim 14 wherein said step of producing a Grid Vendor Rating Table comprises producing a table having an indicator of the number of jobs upon which the ranking for each resource vendor is based.
- 10 25. The method as set forth in Claim 14 wherein said step of performing an analysis of said job results against said client-driven performance criteria and said self-reports comprises performing one or more analyses pertaining to job types.
- 15 26. The method as set forth in Claim 25 wherein said job type is selected from the group of Online Transaction Processing jobs, batch jobs, database jobs, and scientific jobs.

27. A computer readable medium encoded with software for automatically rating the performance of one or more resource vendors in a grid computing environment, said software performing the steps of:
- receiving one or more grid resource self-reports, each self-report having
- 5 statistics regarding job processing;
- accessing one or more client-driven performance criteria definitions;
- receiving one or more job results from a grid resource; and
- performing by a logical device an analysis of said job results against said client-driven performance criteria and said self-reports; and
- 10 producing a grid resource rating table having zero or more sub-ratings, and having a composite rating.
28. The medium as set forth in Claim 27 wherein said software for receiving one or more client-driven performance criteria definitions comprises software for
- 15 receiving a Service Level Agreement.
29. The medium as set forth in Claim 27 wherein said software for performing an analysis comprises software for determining one or more sub-ratings selected from the group of percentage of jobs completed, percentage of jobs completed
- 20 within specified time constraints, an interactiveness rating, a cost compliance

rating, and a results accuracy rating.

30. The medium as set forth in Claim 27 wherein said software for performing an analysis comprises software for determining a composite rating using a weighted
5 combination of a plurality of sub-ratings.
31. The medium as set forth in Claim 27 wherein said software for producing a grid resource rating table comprises software for producing a human-readable report.
- 10 32. The medium as set forth in Claim 27 wherein said software for producing a grid resource rating table comprises software for producing a computer-readable report.
33. The medium as set forth in Claim 27 wherein said software for producing a grid
15 resource rating table comprises software for producing a rank-ordered Grid Vendor Rating Table for a plurality of resource vendors.
34. The medium as set forth in Claim 33 wherein said software for producing a rank-ordered Grid Vendor Rating Table for a plurality of resource vendors
20 comprises software for producing a rank-ordered Grid Vendor Rating Table for a

plurality of resource vendors using a weighted analysis of said sub-ratings for each resource vendor.

35. The medium as set forth in Claim 27 further comprising software for performing
5 the steps of:

accessing said produced Grid Vendor Rating Table, a job request,
a set of available grid resource characteristics, and one or more client-driven
performance criteria definitions; and

10 producing a grid vendor selection which meets said client-driven
performance definitions according its grid resource characteristics, and which is
indicated by said Grid Vendor Rating Table to historically meet desired
performance criteria.

36. The medium as set forth in Claim 27 wherein said software for producing a Grid
15 Vendor Rating Table comprises software for producing a table having an
indication of the age of the information upon which the table is based.

37. The medium as set forth in Claim 27 wherein said software for producing a Grid
Vendor Rating Table comprises software for producing a table having an indicator
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of the number of jobs upon which the ranking for each resource vendor is based.

38. The medium as set forth in Claim 27 wherein said software for performing an analysis of said job results against said client-driven performance criteria and said self-reports comprises software for performing one or more analyses pertaining to job types.

39. The medium as set forth in Claim 38 wherein said job type is selected from the group of Online Transaction Processing jobs, batch jobs, database jobs, and scientific jobs.